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NOTES ON THE INTERNATIONAL INSTITUTE OF AGRICULTURE

The world trade in eggs (*Mid-July Press communiqué*). — The egg trade is of importance owing to the relatively high unit value of the commodity and to the large volume of international movements. Total exports declined continuously between 1930 and 1935 but increases in 1936 and 1937 to 340,000 metric tons and 360,000 tons respectively. Many countries contribute to the trade including, in order of importance, Denmark, the Netherlands, Poland and China which supplied, in 1937, 27.7 per cent., 20.9 per cent., 7.3 per cent. and 6.9 per cent. respectively, of the total exports. Some of the secondary exporters – in particular those of eastern and south-eastern Europe and the United States – have considerable potential reserves and given favourable circumstances could place large quantities on world markets.

Importing countries number only about nine, including the United Kingdom and Germany, which, between them absorbed 84.3 per cent. of the quantities placed on the market in 1937. The course of their purchases decides the trend of world trade.

In 1937, British imports, at 185,500 metric tons, were nearly 13 per cent. above the average of the years 1930 to 1934 and only 13,600 tons below the record of 1930. 14.6 per cent. of these imports were taken from Empire countries and the remaining 85.4 per cent. from foreign countries. The main suppliers of the British market in 1937, in order of importance, were Denmark, the Netherlands, Poland and Danzig, Ireland, Australia and China.

Germany reduced its imports considerably between 1933 and 1935. In 1936 they increased and in 1937 they reached 90,200 tons against 70,700 tons in 1936. The principal suppliers were the Netherlands, Denmark, Bulgaria and China.

Prices on the United Kingdom market, where so many exporting countries compete, have increased slowly but continuously since 1934. This rise in prices and in increase in the volume of egg trade are the distinguishing features of the economic recovery that began in 1935.

Despite the uncertainties attaching to forecasts of the future course of trade in general, the International Institute of Agriculture believes that the egg trade is in a phase of slow development determined by the increase in consumption, the constancy or slight decline in the numbers of poultry in the main consuming countries and the effects of the situation of the Chinese market on the other surplus-producing areas.

The international cheese trade (*End of July Press communiqué*). — The total trade in cheese in 1937 was greater than in the two previous years, when it fell to the lowest levels recorded since 1924. Exports in 1929 touched a record of 348,000 metric tons. Subsequently they fell year after year until 1936 when thay amounted to 269,000 tons. In 1937 they recovered to 285,000 tons, showing the first increase after a long series of declines.

Only a comparatively small number of countries are interested in the cheese market. 90 per cent. of the exports are supplied by nine countries and 90 per cent. of the imports are absorbed by only five countries.

The three chief exporting countries are New Zealand, the Netherlands and Canada, in that order. These three countries exported 187,000 tons, or 65 per cent. of the total in 1937 but, while the last two have increased their sales abroad since 1935, New Zealand shipments have decreased continuously since 1934. The secondary exporting countries, including Italy, France, Australia and Finland, on the whole maintained or increased their exports, as compared with 1936. Exceptions were Switzerland and Denmark.

The principal importing countries are the United Kingdom, Germany, the United States, the Belgo-Luxemburg Union and France, in that order. The United Kingdom alone takes half the total imports. In 1937 this country increased its imports by 13,408 tons, or 10 per cent. Germany, as a result of the increase in its internal requirements, took 9,000 tons more than in 1936, an increase of 33 per cent. The purchases of the other three countries showed little change in 1937, the United States importing 27,500 tons, the Belgo-Luxemburg Union 22,600 tons and France 13,300 tons.

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INTERNATIONAL BULLETIN OF PLANT PROTECTION

1938 No. 8

DISCOVERIES AND CURRENT EVENTS *

Germany: First Records of the Colorado Beetle (*Leptinotarsa decemlineata*) in 1938 †

A spell of heavy and stormy weather followed by high and occasionally gusty southwest winds give rise between June 1 and 13, 1938 to many flights of *L. decemlineata* in the Rhineland, the Saar Territory and the Palatinate. In many cases, the beetles were found not on the potato crops but on built-up land, on paved streets, roads, squares, inside houses, on roofs and on vegetables and ornamental plants in gardens. In some cases people reported that they had found beetles on their clothes.

During the period indicated, Colorado beetle was reported in the districts of Saarbrücken (18 communes), Saarlautern (13 communes), Ottweiler (10 communes), Kaiserslautern, Merzig, Pirmasens and Zweibrücken (4 communes in each district), Bernkastel and Saarburg (3 communes in each), Aachen, Birkenfeld, Homburg, Landau, Ludwigshafen and St. Ingbert (2 communes in each), Bingen, Frankenthal, Hanau, Neustadt, St. Wendel, Wittlich and Worms (1 commune in each).

Argentine Republic: Researches on the Pepper Diseases at Salta and Jujuy §

Mr. Ernesto F. Godoy, agricultural engineer, is at present working on vegetable garden diseases in Salta and Jujuy.

These researches are specially concerned with certain diseases attacking the peppers and which are endangering the future output of the crops in the district of the Lerma valley and in the departments of Campo Santo and El Carmen.

* Under this and the next heading the countries are arranged in French alphabetical order.

† Communication from the Biologische Reichsanstalt für Land-und Forstwirtschaft, Berlin-Dahlem, official correspondent of the Institute.

§ Communication from the official correspondent of the Institute, Mr. JUAN B. MARCHIONATTO, Agricultural Engineer, Director of 'Sanidad Vegetal', Ministry of Agriculture, Buenos Aires, Argentine Republic.

As early as October 1937 was observed the presence of the blight of peppers (*Phytophthora capsici*), a cryptogamic disease of rapid development which was until then unknown in the north of the Argentine Republic.

This year Mr. Godoy has been able to show that the disease is spreading over a wide area, and that it is destroying the young plants in certain localities of Betania and Campo Santo, and the adult plants in the departments of Chicoana and Rosario de Lerma.

The damage caused has been in proportion more serious in the young crops, and one may quote the case of a farmer in the department of El Carmen who had sown 110 kilogrammes of seeds of pepper, and did not obtain one single seedling for transplantation.

In the district where the Experimental Station of Guemes has its headquarters, the disease has taken such a serious form in the young plants that the sown area has been greatly reduced. According to observations made, it is the oldest crops that have suffered the most, the disease appearing as a rule after the second or third year of growth.

The pepper blight is greatly favoured by much dampness in the air; hence its extreme virulence in the districts where peppers are cultivated in market gardens after the first rains in January.

The possibilities of an important district productive of peppers depend on the chance of eliminating the disease. A plan of campaign has therefore been undertaken including: (1) the sterilization of the soil; (2) the disinfection of the seeds; (3) preservative treatments with Bordeaux mixture; (4) the selection of varieties resistant to the disease.

In view of coping with this and other researches of the same kind, the Ministry of Agriculture is actively working at the creation of a phytopathological laboratory at the Experimental Station of Guemes.

Belgium: The Colorado Beetle in 1938 *

Considerable swarms of *Leptinotarsa decemlineata* coming from the south were reported in Belgium mainly between May 31 and June 8, 1938 and at several subsequent periods.

Southern Rhodesia: Locust Invasion, 1932-1938 †

Monthly Report No. 64. March, 1938.

The Red Locust (*Nomadacris septemfasciata*, Serv.) has been reported, in the hopper stage only, from the following districts during the month, namely:— Umtali, Melsetter, Bekita, Insiza, Matobo, Lomagundi and Sebungwe, but repressive measures have continued in other districts mentioned in last month's report.

* Communication from Professor R. MAYNÉ, Director of the Entomological Station, Gembloux, Belgium.

† Communication from the official correspondent of the Institute, Mr. RUPERT W. JACK, F. E. S., Chief Entomologist, Department of Agriculture, Salisbury, Southern Rhodesia.

The outbreaks on the whole have been localized, crops have been effectively protected and the hopper bands have been or are being destroyed in all accessible localities.

The spraying method has been used exclusively for all larger scale operations in the field, but the baiting method recently developed in the Union of South Africa has been tried out, particularly in reference to hoppers hatching in cultivated lands. The latter method has given good results in certain circumstances but it is felt that considerably more experimentation is needed before reliance can be placed on it for extensive field operations. Rainy weather appears to affect the results of baiting more than those of spraying, and the weather was very wet during the period when the experiments were carried out. The advantages of baiting for general use are, therefore, considered to be still doubtful under tropical conditions, when operations against hoppers have generally to be carried out during the rains.

Monthly Report No. 65. April, 1938.

The appearance of the first winged individuals of the new generation of the Red Locust was reported on April 7, 1938.

Destruction of hoppers has been continued in the various districts concerned, but at the end of the month most of the surviving hoppers appear to have matured.

The winged swarms have not been much in evidence, although the weather has been warm, but an interesting report from the Bulawayo Observatory on the 20th referred to locusts passing over at a great height from N. to S. on three consecutive days.

In general, the number of locusts maturing in the Colony is relatively small and the position appears to be much the same as at the same time last year.

LEGISLATIVE AND ADMINISTRATIVE MEASURES

Germany. — A Supplement No. 6 has been issued rectifying the part concerning Hungary in the list of official organizations in foreign countries authorized to supply the phytopathological certificates which should accompany consignments of plants, potatoes, etc. intended for export to Germany. This list, published on March 1, 1931, had already been completed by 5 supplements issued on July 1 and October 1, 1931, April 1, 1932, March 1 and May 1, 1935. (*Amtliche Pflanzenschutzbestimmungen,* Berlin, 1. Mai 1938, Bd. X, Nr. 4, S. 66).

Argentine Republic. — By Decree No. 123.226 of January 5, 1938 modifying Article 1 of the Decree of December 16, 1911, the following plant and animal parasites have been declared pests to agriculture:— *Plusia nu, Laphygma frugiperda, Cirphis unipuncta, Leucania albilinea, Agrotis ypsilon, Feltia*

malefida, Lycophotia margaritosa, Aspidiotus perniciosus, Stenodontes spinibarbis, Eccoptogaster rugulosus, Eriosoma lanigerum, Prontaspis citri, Chrysomphalus aurantii, Chrys. dictyospermi, Chrys. aonidum, Lepidosaphes beckii, Lecanium hesperidum, Epicauta adspersa, Hylesia nigricans, Asp. hederae, Taphrina deformans, Sphaceloma ampelinum. (*Boletín Oficial de la República Argentina*, Buenos Aires, 5 de febrero de 1938, año XLVI, núm. 13.068, pág. 1534).

*** Decree No. 125.319 of February 12, 1938, regulating everything connected with the recipients for and packing of dried fruits destined either for home market or for exportation, specifies, *inter alia*, that only fruit entirely exempt from insects, disease or any damage of a physical or mechanical origin which is harmful to its good appearance, should be allowed. (*Ibid.*, 10 de marzo de 1938, núm. 13.094, págs. 2787 a 2789).

Brazil (State of Espirito Santo) * — Law No. 228, dated August 4, 1937, makes compulsory the uprooting and burning of all debris of cotton growing and of wild or cultivated plants liable to harbour diseases or pests which attack the cotton plant.

The destruction of the above mentioned debris will take place immediately after harvesting and at the expense of the farmer, whether or no he is the proprietor of the land.

It is forbidden to sow in the State cotton seed other than that distributed by the General Department of Agriculture of the Ministry of Agriculture, Lands and Works, unless by special permission from the Department.

Every firm dealing in cotton seed must, in order to be able to do business, obtain a special permit which will be delivered by the General Department of Agriculture.

France. — By Ministerial Decree of April 14, 1938, the Ministerial Decree of February 28, 1938 relative to the transit over the French customs zone of potatoes originating and proceeding from Belgium, the Netherlands and Great Britain [see this *Bulletin*, 1938, No. 6. pp. 126-127] is modified. (*Journal officiel de la République française*, Paris, 15 avril 1938, LXX^e^ année, n^o^ 91, p. 4465).

*** A Ministerial Decree of April 15, 1938 fixes the distribution as between the various agricultural regions of the importers and exporters of agricultural products of vegetal origin included in 1938 in the control lists of the Phytopathological Service, and also the distribution of the personnel in charge of phytosanitary control of imports and exports for the same year. (*Bulletin de l'Office de Renseignements agricoles*, Paris, 15 juin 1938, année 1938, n^o^ 12, p. 299-301).

* Communication from Mr. S. Gonçalves da Silva, Agricultural Engineer, Director of the Plant Protection Service of the State of Espirito Santo, Victoria.

*** By Ministerial Decree of April 20, 1938, potatoes grown in France may not be shipped to overseas departments, colonies and protectorates before cleaning and packing at the port of departure under the supervision of an officer of the Phytopathological Service.

In the case of Algeria, these operations may be effected, under the same conditions of supervision and at determined periods, in premises attached to stations included in a list to be prepared by the Ministry of Agriculture.

Cleaning may be dry-cleaning or washing, but it must be done in conditions permitting elimination of dirt and any other bodies adhering to or mixed with the tubers.

After cleaning, the tubers must be packed in containers (sacks, boxes, crates, etc.) which have not been previously used. The packing must not be done in the same premises as are used for the cleaning.

The containers must be sealed immediately in the presence of the officer who supervised the preceding operations.

Each shipment must be accompanied by a certificate, conforming with the form annexed to the Decree, signed by the phytosanitary officer, and a copy of the commercial invoice.

Article 3 of the Ministerial Decree of May 10, 1935 [see this *Bulletin*, 1935, No. 8, p. 181] relating to the movement of potatoes is abrogated. (*Journal officiel de la République française*, Paris, 3 mai 1938, LXX^e^ année, n^o^ 104, p. 4979).

*** A Ministerial Decree of May 3, 1938 modifies the Decree of February 28, 1938 [see this *Bulletin*, 1938, No. 6, pp. 126-127] relative to the transit over French customs territory, of potatoes originating in certain foreign countries.

The Ministerial Decree of 14 April, 1938 [see this *Bulletin*, 1938, No. 8, p. 172] is abrogated. (*Ibid.*, 4 mai 1938, n^o^ 105, p. 5048).

Italy. — By virtue of Law No. 987 of June 18, 1931 [see this *Bulletin*, 1931, No. 9, p. 166] introducing measures for the protection of cultivated plants and agricultural products, and of later amendments to the same Law [see this *Bulletin*, 1932, No. 11, p. 185; 1933, No. 3, p. 62; 1936, No. 9, p. 201; 1937, No. 6, p. 125], a Ministerial Decree was issued on February 16, 1938 setting up the interprovincial syndicate of olive-growing of Lucca and Massa Carrara with headquarters at Lucca.

The annual contribution of each member of the syndicate shall not exceed 0.10 lira per bearing olive tree. (*Bollettino Ufficiale del Ministero dell'Agricoltura e delle Foreste*, Roma, 16 marzo 1938, anno X, n. 6, pp. 436-437).

*** By virtue of the Law No. 907 of June 18, 1931 [see this *Bulletin*, 1931, No. 9, p. 166] introducing measures for the protection of cultivated plants and agricultural products, and of the subsequent modifications of the said Law [see this *Bulletin*, 1932, No. 11, p. 185; No. 3, p. 62; 1936, No. 9, p. 201; 1937, No. 6, p. 125], by Ministerial Decree of February 17, 1938, an interprovincial syndicate for olive-growing in Ascoli Piceno and Macerata has been set up with headquarters at Ascoli Piceno.

The annual contribution to be paid by each member of the Syndicate shall not exceed 0.10 lire for each olive tree in bearing. (*Ibid.*, pp. 438-439).

*** By virtue of the Law No. 987 of June 18 1931 [see this *Bulletin*, 1931, No. 9, p. 166] introducing measures for the protection of cultivated plants and agricultural products, and of the subsequent modifications of the said Law [see this *Bulletin*, 1932, No. 11, p. 185; 1933, No. 3, p. 62; 1936, No. 9, p. 201; 1937, No. 6, p. 125], by Ministerial Decree of February 19, 1938 an inter-provincial syndicate for olive-growing in Siena and Grosseto has been set up, with headquarters at Siena.

The annual contribution to be paid by each member of the syndicate shall not exceed 0.10 lire for each olive tree in bearing. (*Ibid.*, p. 443).

*** By Ministerial Decree of the same date, an inter-provincial syndicate for olive-growing in Ancona and Zara has also been established, with headquarters at Ancona. (*Ibid.*, p. 444).

*** By virtue of the Law No. 987 of June 18, 1931 [see this *Bulletin*, 1931, No. 9, p. 166] introducing measures for the protection of cultivated plants and agricultural products, and of the subsequent modifications of the said Law [see this *Bulletin*, 1932, No. 11, p. 185; 1933, No. 3, p. 162; 1936, No. 9, p. 201; 1937, No. 6, p. 125], by Ministerial Decree of February 25, 1938 a compulsory syndicate for the improvement and development of horticultural and fruit crops in the province of Parma has been established at Parma.

The annual contribution to be paid by each member of the syndicate shall not exceed 0.10 lire per fruit tree owned and 100 lire per hectare in the case of horticultural crops. (*Ibid.*, p. 445).

*** By virtue of Law No. 987 of June 18, 1931 [see this *Bulletin*, 1931, No. 9, p. 166], introducing measures for the protection of cultivated plants and agricultural products, and of later amendments to the same Law [see this *Bulletin*, 1932, No. 11, p. 185; 1933, No. 3, p. 62; 1936, No. 9, p. 201; 1937, No. 6, p. 125] a Ministerial Decree of March 5, 1938 establishes the inter-provincial syndicate for olive-growing of Forlì, Pesaro and Ravenna, with head-quarters at Forlì.

The annual contribution of each member of the syndicate shall not exceed 0.10 lira per bearing olive tree. (*Ibid.*, 1° aprile 1938, n. 7, pp. 500-501).

*** By Ministerial Decree of March 5, 1938, the wine-growing territories of the communes of Assisi, Bevagna, Città della Pieve, Collazzone, Corciano, Deruta, Fratta Todina, Gualdo Cattaneo, Gualdo Tadino, Gubbio, Massa Martana, Montecastello di Vibio, Nocera Umbra, Paciano, Piegaro, Spello and Tuoro in the province of Perugia, are considered suspected of infestation by grape phylloxera. (*Gazzetta Ufficiale del Regno d'Italia*, Roma, 16 marzo 1938, anno 79°, n. 62, p. 1064).

*** By Ministerial Decree of March 8, 1938, wild boar hunting, under certain conditions, is authorized in the commune of Tolfa, Province of Rome with a view to protecting crops. (*Ibid.*, 21 marzo 1938, n. 65, p. 1115).

*** A Ministerial Decree of March 9, 1938 establishes the interprovincial syndicate for olive-growing of Bergamo, Brescia, Como, Padua, Treviso, Verona, Vicenza and Trento, with headquarters at Verona. (*Bollettino Ufficiale del Ministero dell'Agricoltura e delle Foreste*, 1° aprile 1938, n. 7, pp. 502-503).

*** By Ministerial Decree of March 31, 1938, the wine-growing districts of Acquaviva Picena, Castel di Lama, Monteprandone and San Benedetto del Tronto, in the province of Ascoli Piceno, are under suspicion of being infested by grape phylloxera. (*Gazzetta Ufficiale del Regno d'Italia*, 16 aprile 1938, n. 88, p. 1469).

*** By Ministerial Decree of March 31, 1938, the wine-growing territories of the commune of Noèpoli, Potenza Province, have been declared infested with grape phylloxera. (*Ibid.*, 26 aprile 1938, n. 95, p. 1587).

*** By a Prefects' Decree, dated April 10, 1938, in order to protect bees, arsenical sprayings on fruit trees are forbidden in the province of Ancona throughout the entire flowering period. (*Agricoltura Nostra*, Ancona, maggio 1938, anno VII, pp. 6-7).

*** By Ministerial Decree of April 22, 1938 a competition based on examination and on qualification is opened for the award of ten bursaries for advanced study in plant pathology and agricultural entomology at Royal phytopathological research and experimental Institutes and at Royal Observatories for plant diseases. (*Gazzetta Ufficiale del Regno d'Italia*, 23 maggio 1938, n. 116, pp. 1965-1966).

*** By virtue of Law No. 987 of June 18, 1931 [see this *Bulletin*, 1931, No. 9, p. 166] introducing measures for the protection of cultivated plants and agricultural products and the amendments to the same Law [see this *Bulletin*, 1932, No. 11, p. 185; 1933, No. 3, p. 62; 1936, No. 9, p. 201; 1937, No. 6, p. 125; 1938, No. 4, p. 81], a Ministerial Decree was issued on April 23, 1938 setting up an interprovincial syndicate for the development and protection of cork production in the provinces of Cagliari, Nuoro and Sassari, with headquarters at Sassari. (*Bollettino Ufficiale del Ministero dell'Agricoltura e delle Foreste*, 16 maggio 1938, n. 10, pp. 719-720).

*** By Ministerial Decree of April 27, 1938, the control of the olive fly [*Dacus oleae*] by arsenical spraying was made compulsory for 1938 in the commune of Pisciotta, Salerno Province. (*Ibid.*, pp. 720-721).

*** By Decree of the Minister of Finance, dated April 26, 1938, the application of the exchange duty, at the reduced rate of 0.75 lire per cent., is extended from May 15, 1938 to the parasiticides commercially sold as 'Nosprasen', 'Gralit', 'Uspulun', 'Uspulun Universale', 'Grani Zelio', 'Colla Botalia', 'Pasta Zelio', and 'Grodil Nuovo'. (*Gazzetta Ufficiale del Regno d'Italia*, 19 maggio 1938, n. 113, pp. 1891-1892).

Morocco (French Zone of). — A Decree of April 14, 1938 authorizes the destruction of rabbits which have been causing considerable damage in the Mamora forest and the riverside properties (valley of the wadi Tiflèt). (*Bulletin Officiel*, Rabat, 29 avril 1938, XXVII[e] année, n° 1331, p. 592).

*** A Decree of May 25, 1938 authorizes the destruction of wild boars which have been causing considerable damage to crops in the territory of the Kelâa-des-Slès civil control post, Fez district. (*Ibid.*, 3 juin 1938, nº 1336, p. 732).

Portugal. — Decree-law No. 28 : 611 of April 22, 1938 makes compulsory the control of plant diseases and pests in the zones previously defined by the General Direction of Agricultural Services and establishes control methods. (*Diário do Govêrno*, Lisboa, 22 de abril de 1938, 1 série, num. 92, pags. 697 a 699).

Switzerland. — A Decree of the Federal Council, dated April 14, 1938, specifies the measures to be adopted, at the frontier and in the country, with a view to preventing the introduction of the wart disease of the potato [*Synchytrium endobioticum*] and the Colorado beetle [*Leptinotarsa decemlineata*] and also regarding their control.

This Decree comes into force from June 1, 1938, and abrogates that of October 5, 1925 relative to the control of wart disease. (*Recueil des Lois fédérales*, Berne, 20 avril 1938, nº 14, p. 169-174).

RECENT BIBLIOGRAPHY

Afanasiev, Mitrofan M. Comparative physiology of Actinomyces in relation to potato scab. *College of Agriculture. University of Nebraska. Agricultural Experiment Station. Research Bulletin 92*, Lincoln, Nebraska, 1937, 63 pp. Literature cited, pp. 61-63.
[*Actinomyces* spp.]

Allington, Wm. B. The separation of plant viruses by chemical inactivation. *Science*, Lancaster, Pa., 1938, Vol. 87, No. 2255, p. 263.

Arant, F. S. The relative efficiency of certain fluorine and arsenic insecticides against the cowpea curculio. *Journal of Economic Entomology*, Menasha, Wisconsin, 1938, Vol. 31, No. 2, pp. 309-313, figs. 1-2. Literature cited, p. 313.
[*Chalcodermus aeneus*].

Arant, F. S. Difficulties encountered in field dusting experiments. *Journal of Economic Entomology*, Menasha, Wisconsin, 1938, Vol. 31, No. 2, pp. 314-315. Literature cited, p. 315.

Baraton-Mazen, Georges. Emploi du bore contre la maladie du cœur de la betterave. *La Vie Agricole et Rurale*, Paris, 1938, nº 4, p. 158-161, 3 fig.

Bauer, Rudolf. Beiträge zur Physiologie von Dematium pullulans de Bary. *Zentralblatt für Bakteriologie, Parasitenkunde und Infektionskrankheiten*, II. Abt., Jena 1938, 98. Bd., Nr. 5/9, S. 133-167, Abb. 1-9. Schriftenverzeichnis, S. 166-167.

Baxter, Dow V. Development and succession of forest fungi and diseases in forest plantations. *University of Michigan. School of Forestry and Conservation. Circular No. 1*, Ann Arbor, 1937, 45 pp., 3 figs., 9 pls. References cited, p. [45].

BEALL, Geoffrey. Analysis of fluctuations in the activity of insects. A study on the European corn borer, *Pyrausta nubilalis* Hubn. *Canadian Journal of Research*, Ottawa, 1938, Vol. 16, Sec. D, No. 3, pp. [39]-71, figs. 1-4. References, p. 71.

BECKER, W. B., and TOMLINSON, W. E. Distribution of elm bark beetles in Massachusetts. *Journal of Economic Entomology*, Menasha, Wisconsin, 1938, Vol. 31, No. 2, p. 323.
[*Scolytus multistriatus*, *Hylurgopinus rufipes*].

BECKWITH, Charles S. *Sparganothis sulfureana* Clem., a cranberry pest in New Jersey. *Journal of Economic Entomology*, Menasha, Wisconsin, 1938, Vol. 31, No. 2, pp. 253-256. Literature cited, p. 256.

BERTIN, Ch[arles]. Mesure de l'oxydabilité des soufres. *Bulletin de l'Institut Oenologique d'Algérie*, Alger, 1937, 10e année, nº 116, p. 243-244.

BERTIN, Ch[arles]. Mesure directe de l'efficacité des produits anticryptogamiques. *Bulletin Oenologique et Viticole*, Alger, 1938, 11e année, nº 121, p. 81-83.

BIRAGHI, A[ntonio]. Una interessante modificazione delle pareti cellulari di foglie di " Cycas revoluta " Thunb. *Bollettino della R. Stazione di Patologia Vegetale*, Roma, 1938, anno XVIII, n. s., n. 1, pp. 75-92, figg. 1-5, tav. I. Bibliografia, pp. 91-92.
[In leaflets of *Cycas revoluta*, transversal thickenings of walls of palisade cells were observed in the neighbourhood of characteristic necrotic regions].

BLUNCK, H. Ungenutzte Möglichkeiten im Pflanzenschutz. *Mitteilungen für die Landwirtschaft*, Berlin 1938, 53. Jahrg., Heft 14, S. 304-306; Heft 15, S. 320-322; Heft 16, S. 351-352.

BORZINI, G[iovanni]. Osservazioni su di un seccume del carpino nero (*Ostrya carpinifolia* Scop.). *Bollettino della R. Stazione di Patologia Vegetale*, Roma, 1938, anno XVIII, n. s., n. 1, pp. 131-148, figg. 1-3. Bibliografia, pp. 146-148.
[The disease is attribued to *Cytospora decorticans*, the imperfect stage of *Valsa decorticans*].

BÖTTCHER, Friedrich Karl. Schädlingsbekämpfung und Bienenzucht. *Die Umschau*, Frankfurt a. M. 1938, Jahrg. 42, Heft 11, S. 246-247.

BREAKEY, E. P., [and] OLCOTT, H. S. The non-toxicity of gossypol to certain insects. *Science*, Lancaster, Pa., 1938, New Series, Vol. 87, No. 2248, p. 87.

BRIMBLECOMBE, A. R. Hide beetle damage to Oregon pine. *The Journal of the Australian Institute of Agricultural Science*, Sydney, 1938, Vol. 4, No. 1, pp. 49-50, 1 fig.
[*Dermestes vulpinus* on *Pseudotsuga taxifolia*].

BROADFOOT, W. C., and TYNER, L. E. Studies on foot and root rot of wheat. V. The relation of phosphorus, potassium, nitrogen, and calcium nutrition to the foot- and root-rot disease of wheat caused by *Helminthosporium sativum* P. K. & B. *Canadian Journal of Research*, Ottawa, 1938, Vol. 16, Sec. C, No. 3, pp. 125-134. fig. 1, pl. I. References, p. 134.

BUHL, C., und MEYER, E. Die Bekämpfung des Rapsglanzkäfers. *Mitteilungen für die Landwirtschaft*, Berlin 1938, 53. Jahrg., Heft 9, S. 191-192, Abb. 1-2.
[*Meligethes aeneus*].

CAMPBELL, Roy E., and STONE, M. W. Flooding for the control of wireworms in California. *Journal of Economic Entomology*, Menasha, Wisconsin, 1938, Vol. 31, No. 2, pp. 286-291. Literature cited, p. 291.
[Elateridae].

CARRUTH, L. A. Southern corn shipments and their relation to corn ear worm infestations on Long Island. *Journal of Economic Entomology*, Menasha, Wisconsin, 1938, Vol. 31, No. 2, pp. 256-259. Literature cited, p. 259.
[*Heliothis obsoleta*].

CARPENTER, E. L., and MOORE, William. Sorption of hydrocyanic acid by different species of insects. *Journal of Economic Entomology*, Menasha, Wisconsin, 1938, Vol. 31, No. 2, pp. 270-275, figs. 1-3.

CHAMBERLAIN, G. C. Yellow blotch-curl: a new virus disease of the red raspberry in Ontario. *Canadian Journal of Research*, Ottawa, 1938, Vol. 16, Sec. C, No. 3, pp. 118-124, pls. I-II. References, p. 124.

CHAUVIN, R. Morphologie et pigmentation externes de *Schistocerca gregaria* Forsk. (*transiens dissocians*). *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord*, Alger, 1938, XXIX^e^ année, n^os^ 3-4, p. 249-267, fig. I-IV. Bibliographie, p. 265.

CIFERRI, Raphael. Ustilaginales (Tilletiaceae, Graphiolaceae, Ustilaginaceae). *In* Società botanica italiana. Flora italica cryptogama. Pars I: Fungi. Fasc. n. 17. Rocca S. Casciano, Stabilimento tipografico L. Cappelli, 1938, 443 pp., 23 figg. Bibliografia italiana 'aggiunta, pp. [55]-58.

CLEARE, L. D. Status of the Amazon fly in British Guiana, 1937. *The Agricultural Journal of British Guiana*, Georgetown, 1938, Vol. IX, No. 1, pp. 12-24. References, p. 24.

CLEARE, L. D. Plant legislation in British Guiana and the Caribbean Colonies. *The Agricultural Journal of British Guiana*, Georgetown, 1938, Vol. IX, No. 1, pp. 25-38.

COLLINS, C. W. Two elm scolytids in relation to areas infected with the Dutch elm disease fungus. *Journal of Economic Entomology*, Menasha, Wisconsin, 1938, Vol. 31, No. 2, pp. 192-195, fig. 1.
[*Scolytus multistriatus*, *Hylurgopinus rufipes* and *Ceratostomella ulmi*].

COLLINS, Donald L. Feeding habits of *Scolytus multistriatus* Marsham with reference to the Dutch elm disease. *Journal of Economic Entomology*, Menasha, Wisconsin, 1938, Vol. 31, No. 2, pp. 196-200, figs. 1-2.
[*S. multistriatus* and *Ceratostomella ulmi*].

DEAN, R. W. Experiments on rearing apple maggot adults. *Journal of Economic Entomology*, Menasha, Wisconsin, 1938, Vol. 31, No. 2, pp. 241-244, fig. 1. Literature cited, p. 244.
[*Rhagoletis pomonella*].

DEMETRIADES, S. Y a-t-il une chlorose par excès de fer ? *Revue générale de Botanique*, Paris, 1938, tome L, n° 592, p. 181-201, fig. 1-6, graph. I-III.
[According to the author's experiments, there is no chlorosis caused by a substantial excess of iron].

DEPOIS, R. Comment détruire les limaces dans les jardins et les cultures. *Le Progrès Agricole et Viticole*, Montpellier, 1938, 55^e^ année, n° 8, p. 192-193.

DE SAINT-CHARLES, René. Pour obtenir une bouillie mouillante. *La Vie Agricole et Rurale*, Paris, 1938, n° 1, p. 16-17.

DIETZ, Harry F., and PIERPONT, Roger L. Japanese beetle field control tests in Delaware. *Journal of Economic Entomology*, Menasha, Wisconsin, 1938, Vol. 31, No. 2, pp. 200-204. Literature cited, pp. 203-204.
[*Popillia japonica*].

DOMINICK, C. B. Notes on the locust leaf miner, *Chalepus dorsalis* Thunb. *Journal of Economic Entomology*, Menasha, Wisconsin, 1938, Vol. 31, No. 2, pp. 186-189, fig. 1. Literature cited, p. 189.
[Injurious to *Robinia pseud-acacia*].

DONOHOE, Heber C., SIMMONS, Perez, and BARNES, Dwight F. *Aphomia gularis* Zeller as a pest of prunes. *Journal of Economic Entomology*, Menasha, Wisconsin, 1938, Vol. 31, No. 2, p. 318. Literature cited.

DRIGGERS, B. F., and O'NEILL, W. J. Codling moth parasitism under different spray treatments. *Journal of Economic Entomology*, Menasha, Wisconsin, 1938, Vol. 31, No. 2, pp. 221-223. Literature cited, p. 223.
[*Cydia pomonella*].

DURÁN, José J. Escarabajo pulga de la vid (*Haltica chalybea*). *El Agricultor Mexicano*, C. Juárez, Chih., 1938, tomo 54, núm. 4, págs. 1 y 2.

EIDMANN, H. Die Forleule, ein Grossschädling des deutschen Kiefernwaldes. *Die Umschau*, Frankfurt a. M. 1938, Jahrg. 42, Heft 11, S. 241-243, Bild. 1-4.
[*Panolis flammea*].

EIDMANN, H. Neue Untersuchungen über die Nonne. Ein Überblick über die Arbeiten des Zoologischen Instituts der Forstl. Hochschule Hann.-Münden. *Anzeiger für Schädlingskunde*, Berlin 1938, XIV. Jahrg., Heft 2, S. 13-18.
[*Lymantria monacha*].

EIFRIG, H. Abwehrkampf gegen den Kartoffelkäfer. *Mitteilungen für die Landwirtschaft*, Berlin 1938, 53. Jahrg., Heft 27, S. 616-617.
[*Leptinotarsa decemlineata*].

FAJANS, E., and MARTIN, H. The incorporation of direct with protective insecticides and fungicides. III. Factors affecting the retention and spray residue of emulsions and combined emulsion-suspensions. *The Journal of Pomology and Horticultural Science*, London, 1938, Vol. XVI, No. 1, pp. 14-38, figs. 1-2, pl. I. References, pp. 37-38.

FARSKÝ, Octavianus. Nonnenkontroll-und Vorbeugungsmethode nach Professor Forst.-Ing. Ant. Dyk. *Anzeiger für Schädlingskunde*, Berlin 1938, XIV. Jahrg., Heft 5, S. 52-56, Abb. 1-3; Heft 6, S. 65-67.
[*Lymantria monacha*].

FELT, E. P., and BROMLEY, S. W. Shade tree insects and sprays, 1937. *Journal of Economic Entomology*, Menasha, Wisconsin, 1938, Vol. 31, No. 2, pp. 173-176.

FOSTER, Arthur C., and TATMAN, Everett C. Environmental conditions influencing the development of tomato pockets or puffs. *Plant Physiology*, Lancaster, Pa., 1937, Vol. 12, No. 3, pp. 875-880. Literature cited, pp. 879-880.

FRANCIS, W. D. A new weed on the Darling Downs. *Queensland Agricultural Journal*, Brisbane, 1937, Vol. XLVIII, Pt. 6, pp. 692-694, pl. 274.
[*Astragalus hamosus*].

FRAPPA, C[laudius]. Une méthode nouvelle de lutte contre les Chrysomèles du riz à Madagascar. *Riz et Riziculture*, Paris, 1938, vol. XII, fasc. I, p. 33-39, fig. 1.
[With title also in English:— 'New method of controlling paddy Chrysomelids in Madagascar'. — *Hispa gastroi* and *Trichispa sericea*].

FRAPPA, C[laudius]. Sur l'intérêt des données pluviométriques locales pour la surveillance de *Locusta migratoria capito* Sauss. dans ses aires grégarigènes à Madascascar. *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord*, Alger, 1938, XXIX[e] année, n[os] 3-4, p. 268-281, pl. XIV. Bibliographie, p. 281.

FRICKHINGER, H. W. Schädlingsbekämpfung im Obstbau. *Die Umschau*, Frankfurt a. M. 1938, Jahrg. 42, Heft 11, S. 231-233.

FRIEDRICH, Heim. Über die Spaltöffnungsweiten blattrollkranker Kartoffelpflanzen. Untersuchungen mit der Infiltrationsmethode. *Angewandte Botanik*, Berlin 1938, Bd. XX, Heft 2, S. 129-155, Abb. 1-6. Schriftenverzeichnis, S. 154-155.

FRIEND, R. B., and PLUMB, G. H. Control of the European pine shoot moth. *Journal of Economic Entomology*, Menasha, Wisconsin, 1938, Vol. 31, No. 2, pp. 176-183. Literature cited, p. 183.
[*Rhyacionia buoliana*].

FUCHS, Walter H. Wege und Ziele der Pflanzenschutzforschung. *Kühn-Archiv*, Berlin 1938, Bd. 50, S. 251-274.

GÄBLER, Hellmuth. *Rhynchites nanus* Payk. (– *planirostris* F.) als Triebschädiger der Weide. *Anzeiger für Schädlingskunde*, Berlin 1938, XIV. Jahrg., Heft 6, S. 62-64, Abb. 1. Literatur, S. 64.

GAMBRELL, F. L. Experiments for control of the pine needle scale, *Chionaspis pinifoliae* (Fitch). *Journal of Economic Entomology*, Menasha, Wisconsin, 1938, Vol. 31, No. 2, pp. 183-186. Literature cited, p. 186.

GARDNER, T. R. Influence of feeding habits of *Tiphia vernalis* on the parasitization of the Japanese beetle. *Journal of Economic Entomology*, Menasha, Wisconsin, 1938, Vol. 31, No. 2, pp. 204-207.
[*T. vernalis*, a parasite of *Popillia japonica*].

GIGANTE, R[oberto]. Il mosaico del tabacco. *Bollettino della R. Stazione di Patologia Vegetale*, Roma, 1938, anno XVIII, n. s., n. 1, pp. 93-130, figg. 1-15, tav. II. Bibliografia, pp. 127-129.

GOODHUE, Lyle D., and CASSIL, C. C. Complexity of calcium arsenate as revealed by chemical analysis of fractions of different particle size. *Journal of Economic Entomology*, Menasha, Wisconsin, 1938, Vol. 31, No. 2, pp. 278-280, fig. 1. Literature cited, p. 280.

GOSS, R. W. The influence of various soil factors upon potato scab caused by *Actinomyces scabies*. *College of Agriculture, University of Nebraska. Agricultural Experiment Station. Research Bulletin 93*, Lincoln, Nebraska, 1937, 40 pp., 1 pl. Literature cited, pp. 39-40.

GRAHAM, Samuel A. The walking stick as a forest defoliator. *University of Michigan. School of Forestry and Conservation. Circular No. 3*, Ann Arbor, 1937, 28 pp., 6 figs.
[*Diapheromera femorata*].

GUTIERREZ, Herminio P. Una planta que conviene intercalar entre los pequeños cultivos. El piretro (Chrysanthemum cinerariaefolium Vis.). *Anales de la Sociedad Rural Argentina*, Buenos Aires, 1938, año LXXII, vol. LXXII, n.º 3, págs. 316 a 320, 2 figs. Bibliografía, pág. 320.

HAAS, A. R. C. Factors in varietal susceptibility of walnut fruits to attack by the walnut-husk fly. *Plant Physiology*, Lancaster, Pa., 1937, Vol. 12, No. 3, pp. 721-736, figs. 1-6. Literature cited, p. 736.
[*Rhagoletis completa*].

HADORN, Ch. Le chermes du sapin de Nordmann et du sapin blanc, Dreyfusia nüsslini Br. *Revue Horticole Suisse*, Châtelaine-Genève, 1938, XI[e] année, nº 5, p. 102-105, fig. 1-4.

HAMILTON, Clyde C. Studies on the control of the orchid weevil. *Journal of Economic Entomology*, Menasha, Wisconsin, 1938, Vol. 31, No. 2, pp. 189-192. Literature cited, p. 192.
[*Diorymerellus laevimargo*].

HAMMER, O. H. The scurfy scale and its control. *Journal of Economic Entomology*, Menasha, Wisconsin, 1938, Vol. 31, No. 2, pp. 244-249, figs. 1-3. Literature cited, p. 249.
[*Chionaspis furfura*].

HARMAN, S. W. *Glossonotus crataegi* Fitch. susceptible to dormant oil sprays. *Journal of Economic Entomology*, Menasha, Wisconsin, 1938, Vol. 31, No. 2, pp. 318-319, figs. 1-2.

HARMAN, S. W., and MOORE, J. B. Further studies with lead arsenate substitutes for codling moth control. *Journal of Economic Entomology*, Menasha, Wisconsin, 1938, Vol. 31, No. 2, pp. 223-226.
[*Cydia pomonella*].

HARTZELL, F. Z., MOORE, J. B., and GREENWOOD, D. E. Control of eye-spotted budmoth on apple by lubrificating oil containing dinitro-o-cyclohexylphenol. *Journal of Economic Entomology*, Menasha, Wisconsin, 1938, Vol. 31, No. 2, pp. 249-253. Literature cited, p. 253.
[*Spilonota ocellana*].

HEALD, Frederick Deforest. Introduction to plant pathology. First edition. New York and London, McGraw-Hill Book Company, Inc., 1937, XI + 579 pp., 200 figs. References, pp. 40, 51, 58, 81, 84, 91, 98, 104, 109, 120, 129, 132, 138, 145, 151, 160, 170, 181, 187, 204-205, 213, 227, 233-234, 244, 249, 254, 258-259, 270, 279, 287, 295, 301, 307-308, 312, 325, 334, 339, 342, 355, 366-367, 374, 381-382, 384, 389, 395, 400, 415, 422, 427, 438, 450, 466, 473, 481, 488-489, 497-498, 501, 517, 526, 536, 542, 548.
[This 'Introduction' has been written as the result of a demand from teachers of plant pathology for a somewhat briefer statement of the subject than is given in the author's 'Manual of Plant Diseases' (see this *Bulletin*, 1933, No. 12, p. 279). This new work is not an abridgement of the larger manual; it includes much additional material and the order of presentation is entirely different].

HEAN, A. F. Kromnek disease of flowers and vegetables. *Farming in South Africa*, Pretoria, 1938, Vol. XIII, No. 145, pp. 154-156, figs. 1-6.
[A virus disease].

HEUBEL, G. Ad. Enkele gegevens over de Agaatslak (*Achatina fulica* Fer.) in de Lampongsche Districten II. *De Bergcultures*, Batavia-Stad 1938, 12e jaarg., no 14, blz. 400-401. Literatuur, blz. 401.

HOFFMANN, Walther, und KUCKUCK, Hermann. Versuche zur Züchtung spelzenfreier, eiweissreicher und meltauwiderstandsfähiger Gersten. *Zeitschrift für Züchtung*, Reihe A: Pflanzenzüchtung, Berlin 1938, Bd. XXII, Heft 2, S. 271-302, Abb. 1-2. Schriftennachweis, S. 301-302.
[*Erysiphe graminis hordei*].

HOUGH, W. S. The use of nicotine in codling moth control with special reference to its effectiveness in killing moths. *Journal of Economic Entomology*, Menasha, Wisconsin, 1938, Vol. 31, No. 2, pp. 216-221, fig. 1. Literature cited, pp. 220-221.
[*Cydia pomonella*].

HUCKETT, H. C. Recent problems on Long Island in the control of bean insects. *Journal of Economic Entomology*, Menasha, Wisconsin, 1938, Vol. 31, No. 2, pp. 266-270. Literature cited, p. 270.
[*Epilachna varivestis*].

HUTCHINS, Ross E., and LYLE, Clay. Cottonseed-hull bran in grasshopper bait. *Journal of Economic Entomology*, Menasha, Wisconsin, 1938, Vol. 31, No. 2, p. 319.

ITO, K. Studies on the life history of the pineapple mealybug, *Pseudococcus brevipes* (Ckll.). *Journal of Economic Entomology*, Menasha, Wisconsin, 1938, Vol. 31, No. 2, pp. 291-298, figs. 1-3. Literature cited, pp. 297-298.

JANNONE, Giuseppe. Aspetti bio-morfologici e somatometrici del problema delle fasi nel *Dociostaurus maroccanus* Thunb. in Italia e fuori, con particolare riguardo alla provincia di Napoli. (Secondo contributo). *Bollettino del R. Laboratorio di Entomologia Agraria*, Portici, 1938, vol. I, pp. 261-[328], figg. I-XV. Bibliografia, pp. 326-327.

[For the first contribution to biological knowledge of the Moroccan locust and its parasites in the province of Naples, see this *Bulletin*, 1934, No. 12, p. 284. The present paper sets forth the results of six years of research in the field and in the laboratory (1932-1937) into the biology of *Dociostaurus maroccanus* in its *solitaria* and *transiens congregans* phases. By means of biological, morphological and somatometrical observations (the last-named effected on 1271 individuals), the author describes the behaviour of the Moroccan locust in permanent outbreak centres in the provinces of Naples and Catania. The author relates his own researches with what has been observed and published as to the phases of *D. maroccanus* not only in Italy but also in Montenegro, Spain, Cyprus, Asia Minor, Syria, Iraq, Russia and Algeria, and reaches the conclusion that the phenomenon is evident enough both from the biological point of view—after several years of observation conducted in a given region—and from the morphological and chromatic point of view, after examination of a large number of young and adults in all phases].

JONES, R. M. Toxicity of fumigant – CO_2 mixtures to the red flour beetle. *Journal of Economic Entomology*, Menasha, Wisconsin, 1938, Vol. 31, No. 2, pp. 298-309, figs. 1-5. Literature cited, pp. 308-309.

[*Tribolium castaneum*].

JORDAN. Die Blutlaus, ein gefährlicher Obstbaumschädling. *Mitteilungen für die Landwirtschaft*, Berlin 1938, 53. Jahrg., Heft 27, S. 617-618.

[*Eriosoma lanigerum*].

KATSURA, Kiichi. On the relation of atmospheric humidity to the infection of the rice plant by *Ophiobolus Miyabeanus* Ito et Kuribayashi and to the germination of its conidia. *Annals of the Phytopathological Society of Japan*, Tōkyō, 1937, Vol. VII, No. 2, pp. 105-124.

[In Japanese, with title and summary in English].

KERVÉGANT, D. La maladie à Cercospora des feuilles du bananier. *Bulletin Agricole*, Fort-de-France, 1938, n. sér., vol. VII, n° 1, p. 26-39. Références, p. 38-39.

[*Cercospora musae*].

KRAUSCHE, Kenneth K., and GILBERT, Basil E. Increase of transpiration rates of tomato leaves due to copper sprays. *Plant Physiology*, Lancaster, Pa., 1937, Vol. 12, No. 3, pp. 853-860. Literature cited, pp. 859-860.

LA DUE, J. P. Higher ketones as intermediary solvents for derris res nate used in petroleum spray oil. *Journal of Economic Entomology*, Menasha, Wisconsin, 1938, Vol. 31, No. 2, pp. 319-320.

LA FUZE, H. H. Nutritional characteristics of certain wood-destroying fungi, *Polyporus betulinus* Fr., *Fomes pinicola* (Fr.) Cooke, and *Polystictus versicolor* Fr. *Plant Physiology*, Lancaster, Pa., 1937, Vol. 12, No. 3, pp. 562-646, figs. 1-2. Literature cited, pp. 645-646.

LEPESME, P. Note préliminaire sur la cytologie du sang des acridiens. *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord*, Alger, 1938, XXIX^{e} année, n^{os} 3-4, p. 241-248, pl. IX-XIII. Bibliographie, p. 246-257.

LEWCOCK, H. K. Yellow spot disease of pineapples. *Queensland Agricultural Journal*, Brisbane, 1937, Vol. XLVIII, Pt. 6, pp. 665-672, pls. 263-266. Literature cited, p. 672.
[A virus disease transmitted by *Thrips tabaci*].

LINDGREEN, D. L. Methyl iodide as a fumigant. *Journal of Economic Entomology*, Menasha, Wisconsin, 1938, Vol. 31, No. 2, p. 320.

LUTMAN, B. F. Disinfectants and cut-seed potatoes. *University of Vermont and State Agricultural College. Vermont Agricultural Station. Bulletin 418*, Burlington, Vermont, 1937, 36 pp., 13 figs., 4 pls. Bibliography, pp. 35-36.

MACHACEK, J. E., and GREANEY, F. J. The " black-point " or " kernel smudge " disease of cereals. *Canadian Journal of Research*, Ottawa, 1938, Vol. 16, Sec. C, No. 2, pp. 84-113, figs. 1-2, pl. I. References, pp. 112-113.
[*Alternaria tenuis, A. peglioni, Helminthosporium sativum* and *H. teres* are the fungi chiefly associated with this disease in Manitoba].

MAIER, Willi. Fäulnispilze im Obstkeller. *Die Umschau*, Frankfurt a. M. 1938, Jahrg. 42, Heft 11, S. 238-241, Bild. 1-8.
[*Penicillium glaucum, Botrytis cinerea, Mucor piriformis, M. stolonifer, Monilia fructigena, Fusarium putrefaciens, Trichothecium roseum*].

MARTIN, Lawrence F., BALLS, A. K., [and] MCKINNEY, H. H. The protein content of mosaic tobacco. *Science*, Lancaster, Pa., 1938, New Series, Vol. 87, No. 2258, pp. 329-330.

MENUSAN, Jr, Henry. Results of potato dusting experiments on organic soils. *Journal of Economic Entomology*, Menasha, Wisconsin, 1938, Vol. 31, No. 2, pp. 259-262.
[*Empoasca fabae, Leptinotarsa decemlineata, Epitrix cucumeris, Myzus persicae*].

MORWOOD, R. B. Little leaf of the apple. A progress report. *Queensland Agricultural Research*, Brisbane, 1937, Vol. XLVIII, Pt. 6, pp. 673-678, pls. 267-269.
[Affected trees show a beneficial response to zinc treatment].

NELSON, R. H. Tartar emetic as a field sprays against the gladiolus thrips. *Journal of Economic Entomology*, Menasha, Wisconsin, 1938, Vol. 31, No. 2, pp. 208-211. Literature cited, p. 211.
[*Taeniothrips simplex*].

OFFEN, Helmut. Bekämpfung der Vorratsschädlinge. *Mitteilungen für die Landwirtschaft*, Berlin 1938, 53. Jahrg., Heft 27, S. 618.

OGAWA, Takasi. Shoot drooping disease of *Acer trifidum* Hook. et Arn. caused by *Pseudomonas acernea* n. sp. *Annals of the Phytopathological Society of Japan*, Tōkyō, 1937, Vol. VII, No. 2, pp. 125-135, figs. 1-4. [References], p. 133.
[In Japanese, with title and summary in English].

OKABE, Norio. Studies on the variation of *Bacterium solanacearum*. (Preliminary report). *Annals of the Phytopathological Society of Japan*, Tōkyō, 1937, Vol. VII, No. 2, pp. 95-104, pl. II. [References], pp. 102-103.
[In Japanese, with title and summary in English].

PETERS, G. Einfuhr von Schädlingen verboten ! *Die Umschau*, Frankfurt a. M. 1938, Jahrg. 42, Heft 11, S. 244-245, Abb. 1-3.

PETHERBRIDGE, F. R. Wireworms and sugar-beet. *The Journal of the Ministry of Agriculture*, London, 1938, Vol. XLV, No. 1, pp. 23-27, figs. 1-2.
[Elateridae].

PETHERBRIDGE, F. R., and WRIGHT, D. W. The cabbage aphis (*Brevicoryne brassicae* L.). *The Journal of the Ministry of Agriculture*, London, 1938, Vol. XLV, No. 2, pp. 140-148, figs. 1-4. References, p. 148.

PEPPER, Bailey B., and HAGMANN, Lyle E. The carrot weevil, *Listronotus latiusculus* (Boh.), a new pest on celery. *Journal of Economic Entomology*, Menasha, Wisconsin, 1938, Vol. 31, No. 2, pp. 262-266, fig. 1. Literature cited, p. 266.

PETRI, L[ionello]. Rassegna dei casi fitopatologici osservati nel 1937. *Bollettino della R. Stazione di Patologia Vegetale*, Roma, 1938, anno XVIII, n. s., n. 1, pp. 1-66, figg. 1-9.
[A description of cases observed in Italy and Libia and in some foreign countries. 'Mal secco' disease (*Deuterophoma tracheiphila*) has appeared on lemons in the province of Reggio Calabria, where control has been made compulsory by a Ministerial Decree of May 25, 1937. The bergamot, at present at least, is little affected by this disease].

PICKLES, Alan. Entomological contribution to the study of the sugar-cane froghopper. III. – Observations on the biology of certain neotropical species of *Tomaspis* (Homoptera, Cercopidae). *Tropical Agriculture*, Trinidad, B. W. I., 1938, Vol. XV, No. 3, pp. 56-65, figs. 1-7. References, p. 65.

RAINEY, R. C. Plant protection in the Soviet Union. *Nature*, London, 1938, Vol. 141, No. 3573, pp. 756-757, figs. 1-2.

RANOJEVIĆ, Nikola. Beitrag zur Pilzflora Mazedoniens. (Aus dem Nachlass des Autors herausgegeben von Jovan Jurišić). *Hedwigia*, Dresden N. 1938, Bd. 77, Heft 5/6, S. 233-242.

RAWLINS, T. E., [and] TAKAHASHI, William N. The nature of viruses. *Science*, Lancaster, Pa., 1938, New Series, Vol. 87, No. 2255, pp. 255-256.

REDDICK, Donald, and MILLS, Wilford. Building up virulence in Phytophthora infestans. *American Potato Journal*, Sommerville and New Brunswick, New Jersey, 1938, Vol. 15, No. 2, pp. 19-34. Literature cited, p. 34.

REEKS, W. A. The morphology of the adult of Diprion polytomum (Hartig). *The Canadian Entomologist*, Orillia, 1937, Vol. LXIX, No. 12, pp. 257-264, pl. 15. References, p. 263.

RIETH, Günter. Ein Versuch zur Vergrämung von Maikäfer-Weibchen. *Anzeiger für Schädlingskunde*, Berlin 1938, XIV. Jahrg., Heft 2, S. 18-21.
[*Melolontha*].

ROBERTSON, W. C. Fungicides and insecticides. Brands registered for 1938. *Journal of the Department of Agriculture of Victoria*, Melbourne, 1938, Vol. XXXVI, Pt. 6, pp. 289-300.

RUNGS, Ch. Une noctuelle nuisible aux cultures du Maroc: Prodenia litura F. *La Terre Marocaine*, Casablanca, 1938, nº 99, p. 22-24, 2 fig.

SALAS M., Enrique García. En busca de entomófagos para el Pseudococcus brevipes en Colombia. *Revista Nacional de Agricultura*, Bogotá, 1938, año XXXIV, núm. 405, págs. 1698 a 1702.

SANFORD, G. B. Studies on *Rhizoctonia Solani* Kühn. III. Racial differences in pathogenicity. *Cnadian Journal of Research*, Ottawa, 1938, Vol. 16, Sec. C, No. 2, pp. 53-64, pl. I. References, pp. 63-64.

SCHOENE, W. J. Ecological studies of the white apple leafhopper, *Typhlocyba pomaria* McAtee. *Journal of Economic Entomology*, Menasha, Wisconsin, 1938, Vol. 31, No. 2, pp. 229-232, fig. 1. Literature cited, p. 232.

SCHOENE, W. J., and UNDENHILL, G. W. Control of tobacco blue mold (downy mildew) and tobacco flea beetle. (A progress report in two parts). 2. Suggestions for control of tobacco flea beetle. *Virginia Polytechnic Institute. Virginia Agricultural Experiment Station. Bulletin 313*, Blacksburg, Virginia, 1937, pp. 11-14, figs. 5-6.
[*Epitrix parvula*].

SCHÖNWIESE, Fritz. Einige Beobachtungen über das Auftreten und den Parasiten-Befall der Lärchenminiermotte. *Centralblatt für das gesamte Forstwesen*, Wien 1937, 63. Jahrg., Heft 12, S. 312-316, 1 Abb.
[*Pezomachus laricellae, Hemiteles pulchellus, E. albipalpus, Microdus pumilus, Entedon laricinellae, E. arcuatus, Pteromalus semiclavatus, Necremnus leucarthrus*, as parasites of *Coleophora laricella*].

SCHOPFER, William Henri, et BLUMER, Samuel. Les facteurs de croissance des espèces du genre *Ustilago*. *Comptes rendus hebdomadaires des séances de l'Académie des Sciences*, Paris, 1938, tome 206, nº 14, p. 1141-1143.

SHERMAN, Franklin. Massing of convergent ladybeetle at sommits of mountains in southeastern United States. *Journal of Economic Entomology*, Menasha, Wisconsin, 1938, Vol. 31, No. 2, pp. 320-322, fig. 1.
[*Hippodamia convergens*].

SIBILIA, Cesare. Ricerche sulle ruggini dei cereali. VIII. Prime notizie sulla " Puccinia graminis tritici " in Africa orientale italiana. *Bollettino della R. Stazione di Patologia Vegetale*, Roma, 1938, anno XVIII, n. s., n. 1, pp. 67-74. Lavori consultati, p. 74.

SMIT, Bernard. The cyanide fumigation of citrus trees in the eastern Cape Province, South Africa. *Union of South Africa. Department of Agriculture & Forestry. (Plant Industry Series, No. 21)*. Pretoria, 1937, 39 pp., 14 figs., 1 pl. Bibliography, p. 39.

SMITH, Floyd F., and UTTER, L. G. The iris thrips and its control by hot water, with notes on other treatments. *United States Department of Agriculture. Circular No. 445*, Washington, D. C., 1937, 12 pp., 6 figs.
[*Bregmatothrips iridis*].

SMITH, L. E., SIEGLER, E. H., and MUNGER, F. Organic compounds highly toxic to codling moth larvae. *Journal of Economic Entomology*, Menasha, Wisconsin, 1938, Vol. 31, No. 2, pp. 322-323. Literature cited, p. 323.
[*Cydia pomonella*].

SNELL. Sortenschutz und Krebsbekämpfung bei der Kartoffel. *Mitteilungen für die Landwirtschaft*, Berlin 1938, 53. Jahrg., Heft 8, S. 175.
[*Synchytrium endobioticum*].

SNELLING, Ralph O., and DAHNIS, Reynold G. Resistant varieties of sorghum and corn in relation to chinch bug control in Oklahoma. *Oklahoma Agricultural and Mechanical College. Agricultural Experiment Station. Experiment Station Bulletin No. 232*, Stillwater, Oklahoma, 1937, 22 pp., 9 figs.
[*Blissus leucopterus*].

SNELLING, Ralph O., PAINTER, Reginald H., PARKER, John H., and OSBORN, W. M. Resistance of sorghums to the chinch bug. *United States Department of Agriculture. Technical Bulletin No. 585*, Washington, D. C., 1937, 56 pp., 15 figs., 1 pl. Literature cited, pp. 53-56.
[*Blissus leucopterus* and *Sorghum vulgare*].

SOKANOWSKY, Boris. Zur Bekämpfung der Spinnmilbe *Tetranychus althaeae* v. Haerst. in Gehölzen der Moskauer Anlagen. *Anzeiger für Schädlingskunde*, Berlin 1938, XIV. Jahrg., Heft 6, S. 68-69.

SPENCER, Ernest L. Influence of host nutrition on systemic development of tobacco mosaic. *Plant Physiology*, Lancaster, Pa., 1937, Vol. 12, No. 3, pp. 825-832. Literature cited, p. 832.

SPRAGUE, Roderick. Influence of climatological factors in the development of Cercosporella foot rot of winter wheat. *United States Department of Agricul-*

ture. Circular No. 451, Washington, D. C., 1937, 39 pp., 15 figs. Literature cited, p. 39.
[*Cercosporella herpotrichoides*].

SPRENGEL. Ameisen, Blattläuse und Kulturpflanzen. *Die Umschau*, Frankfurt a. M. 1938, Jahrg. 42, Heft 11, S. 234-235.

STAEHELIN, M. Observations sur l'efficacité du traitement bleu et des traitements combinés. *La Terre Vaudoise*, Lausanne, 1938, XXX^e année, n° 3, p. 27-29. [See on this subject the notes of M. Staehelin and P. Bovey (*Bulletin*, 1937, No. 4, p. 81 and No. 6, p. 142)].

STEHR, Wm. C. The biology of Corythucha aesculi O. & D. (Hemiptera, Tingitidae) on the yellow buckeye, Aesculus octandra Marsh. *The Ohio Journal of Science*, Columbus, 1938, Vol. XXXVIII, No. 1, pp. 13-24, figs. 1-3. Bibliography, p. 24.

STEINER, Harold M. Effects of orchard practices on natural enemies of the white apple leafhopper. *Journal of Economic Entomology*, Menasha, Wisconsin, 1938, Vol. 31, No. 2, pp. 232-240, figs. 1-2. Literature cited, p. 240.
[*Typhlocyba pomaria*].

STELLWAAG, [F.]. Die Lehre vom Massenwechsel der Schädlinge und ihre Bedeutung für die Wirtschaft. *Die Umschau*, Frankfurt a. M. 1938, Jahrg. 42, Heft 11, S. 235-237, Bild. 1-3.

STELZNER, G. Zur Bekämpfung der Ackerunkräuter. *Forschungsdienst*, Berlin 1938, Bd. 5, Heft 5, S. 230-243. Schrifttum, S. 240-243.

STEVENS, O. A. North Dakota weeds. *North Dakota Agricultural College. Extension Service. Circular 156*, Fargo, North Dakota, 1937, 60 pp., 59 figs.

STEVENS, O. A., and HELGESON, E. A. Field bindweed in North Dakota. *The North Dakota Agricultural College. Extension Service. Circular 158*, Fargo, North Dakota, 1937, 8 pp., 4 figs.
[*Convolvulus arvensis*].

TAYLOR, Carlton F. The incidence of yellow dwarf in potato varieties. *American Potato Journal*, Sommerville and New Brunswick, New Jersey, 1938, Vol. 15, No. 2, pp. 37-40. Literature cited, p. 40.
[A virus disease].

THORNBERRY, H. H. Crystallization of tobacco-mosaic virus protein. *Science*, Lancaster, Pa., 1938, New Series, Vol. 87, No. 2248, pp. 91-92.

TURNBULL, J. Fruit tree spraying in 1937. *The Journal of the Ministry of Agriculture*, London, 1938, Vol. XLV, No. 1, pp. 16-22.

TUTIN, T. G. The autecology of *Zostera marina* in relation to its wasting disease. *The New Phytologist*, London, 1938, Vol. XXXVII, No. 1, pp. 50-71, figs. 1-2, pls. I-II. References, pp. 70-71.

VINAS, Jean. Les poudreuses. *Bulletin de l'Institut œnologique d'Algérie*, Alger, 1937, 10^e année, n° 116, p. 252-257, 5 fig.

VIÑAS, Jean. Le Derris insecticide. *Bulletin Oenologique et Viticole*, Alger, 1938, 11^e année, n° 121, p. 102-104. Bibliographie, p. 103-104.
[See also this *Bulletin*, 1938, No. 7, p. 167].

VOHL, Gerhard Johann. Untersuchungen über den Braunrost des Weizens *Puccinia triticina* Erikss. *Zeitschrift für Züchtung*, Reihe A: Pflanzenzüchtung, Berlin 1938, Bd. XXII, Heft 2, S. 233-270, Taf. 1-3. Literatur, S. 268-270.

WALKER, J. C. Diseases of cabbage and related plants. *U. S. Department of Agriculture. Farmers' Bulletin No. 1439*, Washington, D. C., 1938, 35 pp., 13 figs.

WARD, F. S. Cercospora leaf spot of bananas. *The Journal of the Jamaica Agriculture Society*, Kingston, Ja., 1938, Vol. XLII, Nos. 1 & 2, pp. 23-34, figs. 1-6. References, p. 34.
[*Cercospora musae*].

WASEWITZ, Hans. Beiträge zur Biologie und Bekämpfung der durch Sclerotinia minor verursachten Salatfäule. *Angewandte Botanik*, Berlin 1938, Bd. XX, Heft 1, S. 70-118, Abb. 1-5. Benutzte Literatur, S. 118.

WEIGEL, C. A., and NELSON, R. H. Insecticidal tests against red spiders and thrips on greenhouse tomatoes and cucumbers. *Journal of Economic Entomology*, Menasha, Wisconsin, 1938, Vol. 31, No. 2, pp. 211-216. Literature cited, p. 216.
[*Tetranychus telarius*, *Thrips tabaci*].

WELLMAN, Frederick L. Poverty of human requisites in relation to inhibition of plant diseases. *Science*, Lancaster, Pa., 1938, New Series, Vol. 87, No. 2247, pp. 64-65.

WICKENS, G. M. A new and serious disease of tobacco in S. Rhodesia. Preliminary note. *The Rhodesia Agricultural Journal*, Salisbury, 1938, Vol. XXXV, No. 3, pp. 181-184, 2 figs.
[Probably a virus disease].

WIESMANN, R. Die Orientierung der Kirschfliege, Rhagoletis cerasi L., bei der Eiablage. (Eine sinnesphysiologische Untersuchung). *Landwirtschaftliches Jahrbuch der Schweiz*, Bern 1937, LI. Jahrg., Heft 10, S. 1080-1109, Fig. 1-7. Literaturverzeichnis, S. 1109.
[With a summary also in French].

WILDE, S. A. Recent findings pertaining to the use of sulfuric acid for the control of damping-off disease. *Journal of Forestry*, Washington, D. C., 1937, Vol. 35, No. 12, pp. 1106-1110.

WILDFORD, Bill Howard. The spruce gall aphid (*Adelges abietis* Linnaeus) in southern Michigan. *University of Michigan. School of Forestry and Conservation. Circular No. 2*, Ann Arbor, 1937, 35 pp., 8 figs. References cited, p. [35].

WILSON, R. D. Occurrence of *Bacterium syringae* (van Hall) E. F. Smith on French beans (*Phaseolus vulgaris* L.) in New South Wales. *The Journal of the Australian Institute of Agricultural Science*, Sydney, 1938, Vol. 4, No. 1, pp. 42-43, 1 fig. References, p. 43.

WILSON, R. D. A selective medium for *Bacterium medicaginis* var. *phaseolicola* (Burkholder) Link and Hull. *The Journal of the Australian Institute of Agricultural Science*, Sydney, 1938, Vol. 4, No. 1, pp. 47-49. References, p. 49.

WILLCOCKS, F. C., and BAHGAT, Said. The insect and related pests of Egypt. Vol. I, Pt. 2: Insects and mites injurious to the cotton plant. Being a general account of the principal pests of Egyptian cotton together with descriptions of and notes on some other insects and mites which live on cotton or dwell in and about the cotton-fields. Cairo, Lencioni, 1937, XVI + 792 + XVI pp., 89 figs., 14 pls.
[Published by the Egyptian Royal Society of Agriculture, this large part of the volume dealing with the pests of cotton is the sequel to the part devoted entirely to the pink bollworm.
The sub-title to this part indicates the content clearly.
The two authors describe in sixteen sections representative Collembola, Orthoptera, Dermaptera, Isoptera, Embioptera, Psocoptera, Ephemeroptera, Odonata, Thysanoptera, Hemiptera, Neuroptera, Lepidoptera, Coleoptera, Hymenoptera, Diptera and Acarina harmful to cotton plants.
Excellent coloured plates accompany the text].

WILLIAMS, W. R. Lloyd. Prevention of frost damage in orchards. Visit to western States of America. *The New Zealand Journal of Agriculture*, Wellington, 1937, Vol. 55, No. 4, pp. 215-218.

WIMMER, E. Ein Beitrag zur Tannenlausfrage. *Forstwissenschaftliches Centralblatt*, Berlin 1938, 60. Jahrg., Heft 4, S. 118-125, Abb. 1-6. Schrifttum, S. 125. [*Dreyfusia nordmannianae, D. piceae*].

WINDERS, C. W. Groundsel-bush in south-eastern Queensland. *Queensland Agricultural Journal*, Brisbane, 1937, Vol. XLVIII, Pt. 6, pp. 656-664, pls. 261-262. [*Baccharis halimifolia* as weed].

WINGARD, S. A., and HENDERSON, R. G. Control of tobacco blue mold (downy mildew) and tobacco flea beetle. (A progress report in two parts). 1. Control of tobacco blue mold (downy mildew). *Virginia Polytechnic Institute. Virginia Agricultural Experiment Station. Bulletin 313*, Blacksburg, Virginia, 1937, pp. 1-10, figs. 1-4. [*Peronospora tabacina*].

WOLCOTT, George N. Presence of host keeps parasites alive in captivity. *Science*, Lancaster, Pa., 1938, New Series, Vol. 87, No. 2259, p. 352. [*Larra americana*, a parasite of *Scapteriscus vicinus*].

WOLK, A. Biologie und Bekämpfung der Typhulafäule an Winter-Gerste. *Die kranke Pflanze*, Dresden 1938, 15. Jahrg., Heft 2, S. 23-27, Abb. 1-5. [*Typhula graminum*].

ZILLIG, Hermann. Der Eichenprozessionsspinner (*Thaumetopoea processionea* L.) als Gelegenheitsschädling an Weinreben. *Anzeiger für Schädlingskunde*, Berlin 1938, XIV. Jahrg., Heft 6, S. 61-62, Abb. 1-2.

ZIMMERMAN, Elwood C. Synonimy of the *Euscepes* sweet potato weevil (Coleoptera, Curculionidae). *Journal of Economic Entomology*, Menasha, Wisconsin, 1938, Vol. 31, No. 2, p. 323. [*Euscepes postfasciatus* (Fairmaire) Zimmerman, *Cryptorrhynchus postfasciatus* Fairmaire, *C. batatae* Waterhouse, *Hyperomorpha squamosa* Blackburn, *E. batatae* (Waterhouse) Champion].

ZOLOTAREVSKY, B. Recherches sur les foyers grégarigènes du criquet migrateur africain (*Locusta migratoria migratorioides* Rch. et Frm., Orth.). Rapport de mission par — — . *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord*, Alger, 1938, XXIX^e année, nos 3-4, p. 123-240, graph. nos 1-6, cartes nos 1-2. Ouvrages cités, p. 238-240.

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Accadémie des sciences coloniales. Comptes rendus des séances. Communications. v. 25, 27. 1936, 1937. Séance publique annuelle. Paris, Société d'éditions géographiques, maritimes et coloniales, 1937 1938. 2 vols.

Annual review of biochemistry v. 7. [Stanford], Annual review, Inc., Stanford University, P. O., 1938. 571 p.

Aschenbrandt, Th. Die landwirtschaftliche Betriebsprüfung 2. erweiterte Aufl. Berlin, C. Heymann, 1936. 8, 68 p.

Assemblée permanente des présidents des Chambres d'agriculture, 7ème session. Session ordinaire des 30 novembre — 1er décembre 1937. Compte rendu. Amiens, Imp. nouvelle, 1938. 406 p.

Association of land-grant colleges and universities. Proceedings. 51st Annual convention. Washington, D. C. November 14-17, 1937. [New Haven, Conn. Quinniplack press, 1938]. 374 p.

Bratiano, Constantin. Le crédit foncier rural en Roumanie. (Une grande institution de crédit). Paris, Librairie technique et économique, 1937. 116 p.

Bourdin, François. Le crédit agricole et la crise. Paris, Librairie technique et économique, 1937. 125 p.

Carbone, Adriano. Questa è l'Etiopia. Geografia, costituzione politica, civile e religiosa. Usi, costumi, credenze. Mercati, comunicazioni, dogane. Possibilità economiche. Storia. In appendice: Tutti i trattati italo-etiopici. Napoli, Rispoli, 1936. 219 p.

Cardellicchio, Silvio. Elementi di finanza, 4a edizione rifatta in conformità dei programmi ministeriali del R. D. 7 maggio 1936-XIV, n. 762. Catania, Studio editoriale moderno, 1936. VIII, 215 p.

Congrès international de géographie. Comptes rendus du Congrès international de géographie, Varsovie 1934. v. 4.: Travaux de la Section 4-6 et communications aux séances spéciales. Varsovie, 1938. 415 p.

Commission des fédérations suisses des syndicats d'élevage bovin. 21ème Rapport de gestion 1937. Berne, G. Grunau, [1938]. 13 p.

Dairy industries catalog file of equipment, supplies and services used by dairy products manufacturers. 10th Annual edition. Milwaukee, Wis. The Olsen publishing Co., 1937.

Deutscher Forstverein. Jahresbericht, 1937. Berlin, « Der Deutsche Forstwirt » [1938]. 626 p.

Flücht, A. H. und A. v. Selasinsky. Der Motor in der Landwirtschaft. Bearb. von A. H. Flücht für den technischen Teil [und] A. v. Selasinsky für den wirtschaftlichen Teil. [Eine zusammengefasste Studie der Erzeugung der deutschen Kraftfahrzeugindustrie für die Motorisierung des deutschen Bauern und Landwirts.] Berlin, Aku-Verlag (A. Kunze), 1938. 104 p. (Eine Aufsatzreihe der Berliner Börsen-Zeitung).

Gualdi, Angelo. Guida-annuario delle sagre, fiere e mercati d'Italia [1938]. Carpi, Gualdi Germano & figli, [1938]. 528, 132 p.

Horvath, A. A. The soybean industry. New York, Chemical publishing cº, 1938. vi, 221 p.

The **Indian** year book 1937-38 v. 25. Calcutta, B. Coleman & Co., [1938]. 1174 p.

Land settlement association. 3rd Annual report 1937. [London, The Sylvan press, 1938]. 47 p.

Lebensmittelverkehr. 1. Lebensmittelgesetzgebung und Lebensmittelkontrolle, von Professor Dr. Bames. 2. Erzeugung und Verbrauch der Lebensmittel, von Dr. Agr. Ertel. Berlin, C. Heymann, 1937. VIII, 216 p. (Handbücherei für den öffentlichen Gesundheitsdienst, hrsg. von Dr. Gütt. Bd. 9.).

Massachusetts horticultural society. 1938 Year book with the annual reports for 1937. [Boston, 1938]. 114 p.

Myrdal, Gunnar. Jordbrukspolitiken under omläggning. Stockholm, Kooperativa förbundets bokförlag, [1938]. 126 p. (KF:s samhällsekonomiska bibliotek.). [The reconstruction of agricultural policy].

Perdisa, Luigi. Monografia economico-agraria dell'Emilia. Faenza, Stabilimento grafico Lega, 1938. x, 398 p.

The **Press** directory of Australia and New Zealand 1938. 9th Edition. Sydney, Country press, [1938]. 276 p.

Queensland cane growers' association. 12th Annual conference. Verbatim report of proceedings held at Brisbane on 11th, 12th, 14th-17th May 1938. Toowoomba. Producers' publishing co., [1938]. 127 p.

Rikard-Bell, H. M. The hand book of modern pig farming. London, H. F. & G. Witherby, [1937]. 128 p.

Schöhl, Harald. Oesterreichs Landwirtschaft. Gestalt und Wandlung, 1918-1938. Berlin, Reichsnährstand Verlags-Ges. m. b. H., [1938]. 126 p.

Schultze, Johannes. Die Hofbesitzer in den Dörfern des Landes Ruppin 1491 bis 1700. Neuruppin, W. Stein, 1937. XIV, 79 p. (Veröffentlichungen des Historischen Verein der Grafschaft Ruppin Nr. 8.).

Società agraria della Provincia di Bologna. Annali. Anno accademico 130., v. 65 degli Annali e 75 delle Memorie per l'annata 1937. Bologna, P. Cuppini, 1938. 193 p.

Suisse. Commission d'étude des prix. Die Verhältnisse im schweizerischen Lebensmittelkleinhandel Bern, 1937. Bd. 4. (Veröffentlichung Nr. 17 der Preisbildungskommission des Eidg. Volkswirtschaftsdepartements).

Wilson, H. F. The historical development of insect classification, by H. F. Wilson and M. H. Doner. St. Louis [etc.], J. S. Swift cº, [1937]. 11, 133 p.

White, Henry F. Cooperative marketing of farm products in the United States. Siloam Springs, Arkansas, 1937. 176 p.

Willcocks, F. C. The insect and related pests of Egypt. Cairo, Printed by Lencioni, 1937. v. 1. Insects and mites injurious to the cotton plant. In collaboration with Said Bahgat. 791 p.

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